Fig. 1

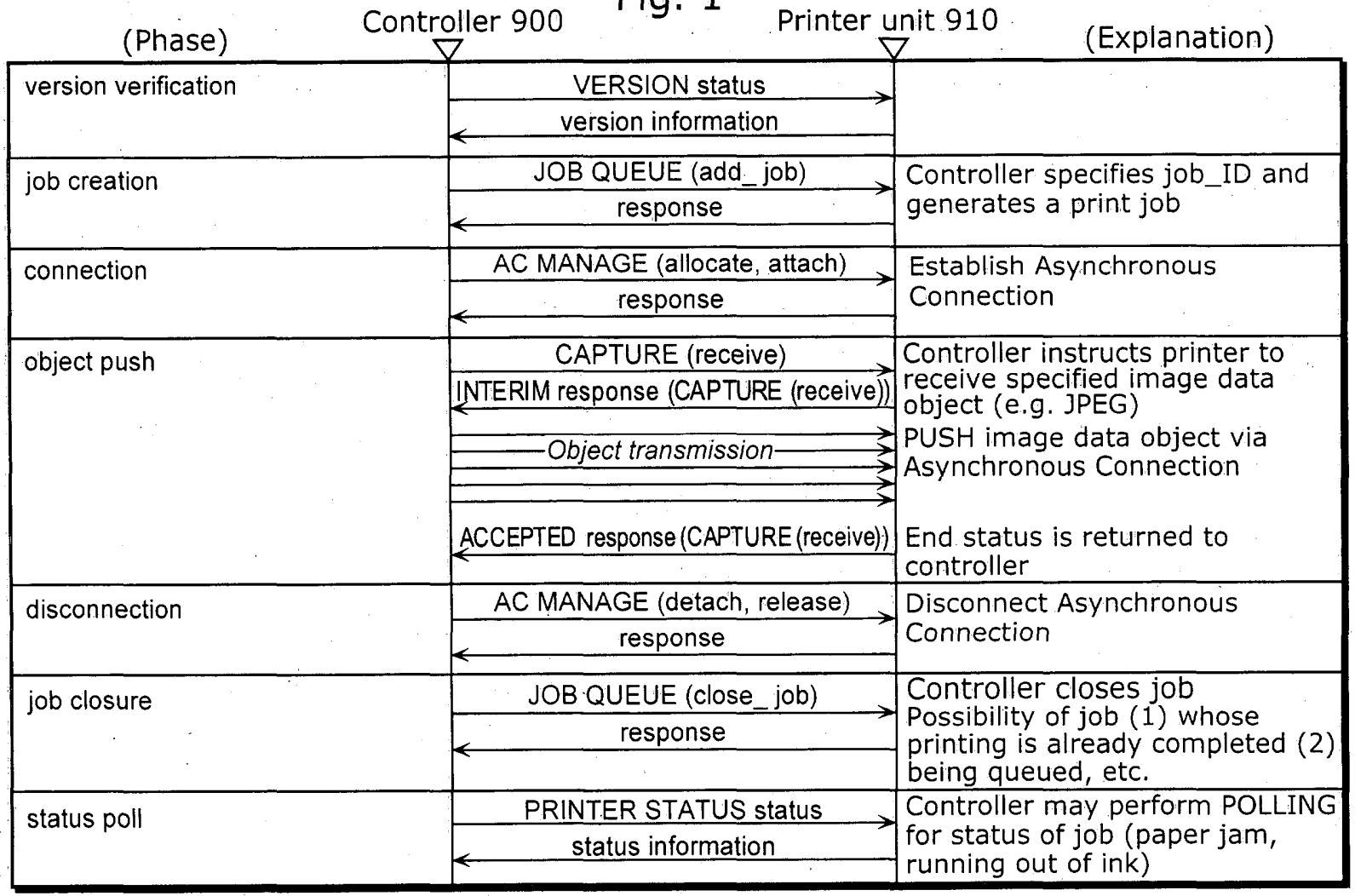

(Phase)
Controller 900
Printer unit 910
(Explanation)
version verification
VERSION status
version information
job creation
JOB QUEUE (add_ job)
response
Controller specifies job_ID and generates a print job
connection
AC MANAGE (allocate, attach)
response
Establish Asynchronous Connection
object push
CAPTURE (receive)
INTERIM response (CAPTURE (receive))
Controller instructs printer to receive specified image data object (e.g. JPEG)
Object transmission
PUSH image data object via Asynchronous Connection
ACCEPTED response (CAPTURE (receive))
End status is returned to controller
disconnection
AC MANAGE (detach, release)
response
Disconnect Asynchronous Connection
job closure
JOB QUEUE (close_ job)
response
Controller closes job
Possibility of job (1) whose printing is already completed (2) being queued, etc.
status poll
PRINTER STATUS status
status information
Controller may perform POLLING for status of job (paper jam, running out of ink)

Fig. 2

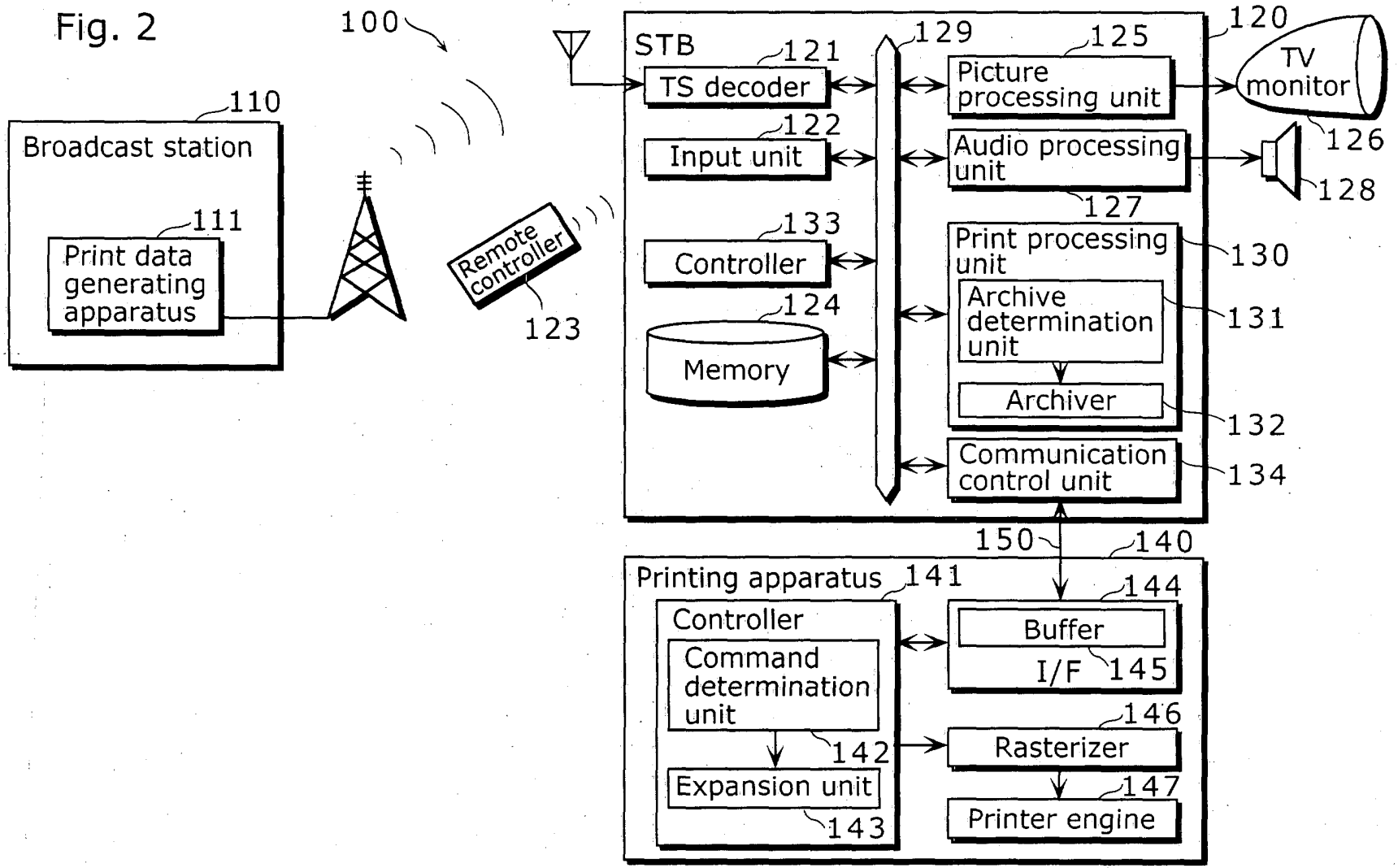

100
110
Broadcast station
111
Print data generating apparatus
Remote controller
123
STB
121
TS decoder
122
Input unit
133
Controller
124
Memory
129
125
Picture processing unit
Audio processing unit
127
Print processing unit
130
Archive determination unit
131
Archiver
132
Communication control unit
134
120
TV monitor
126
128
150
140
Printing apparatus
141
Controller
Command determination unit
142
Expansion unit
143
144
Buffer
I/F
145
146
Rasterizer
147
Printer engine

Fig. 3

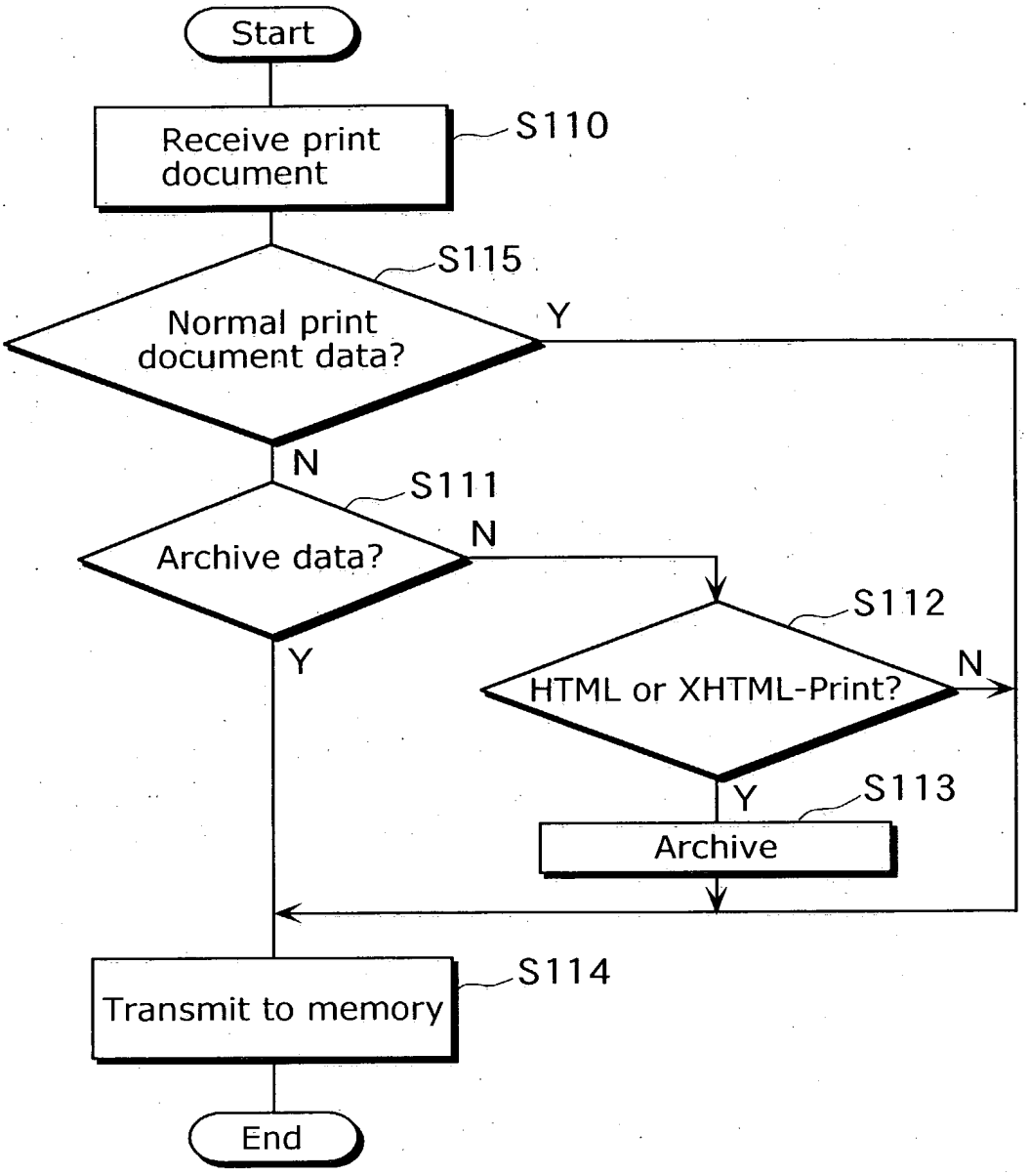

Start
Receive print document
S110
S115
Normal print document data?
Y
N
S111
Archive data?
N
Y
S112
HTML or XHTML-Print?
N
Y
S113
Archive
Transmit to memory
S114
End

Fig. 4

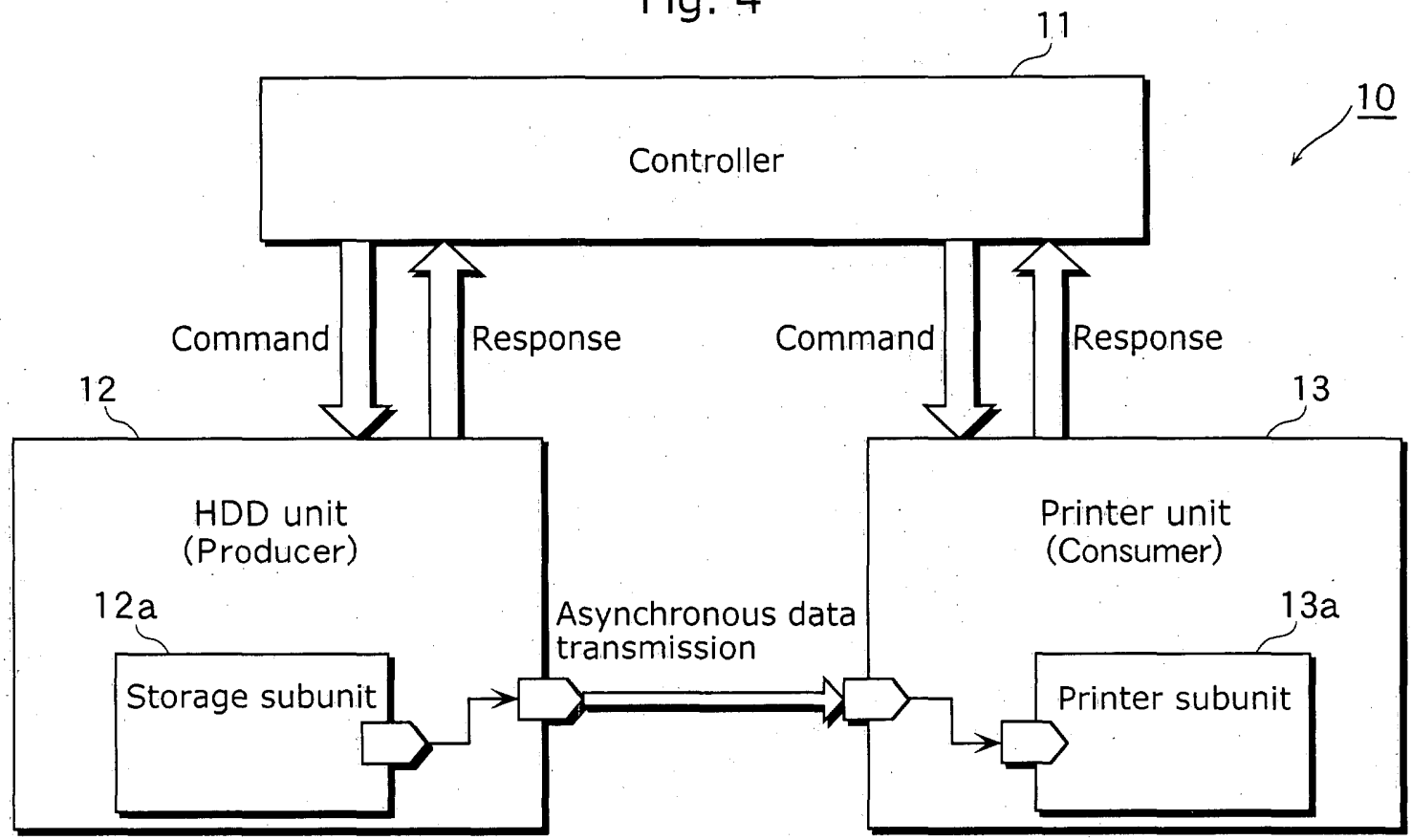

11
10
Controller
Command
Response
Command
Response
12
13
HDD unit
(Producer)
Printer unit
(Consumer)
12a
13a
Asynchronous data
transmission
Storage subunit
Printer subunit

Fig. 5

CAPTURE command frame	
subfunction	(1)
status	(1)
result	(1)
destination_plug	(1)
print_ job_ID	(12)
image_ format_specifier	(2)
data_size	(4)
image_size_x	(2)
image_size_y	(2)
next_pic	(2)
next_page	(2)

Fig. 6A

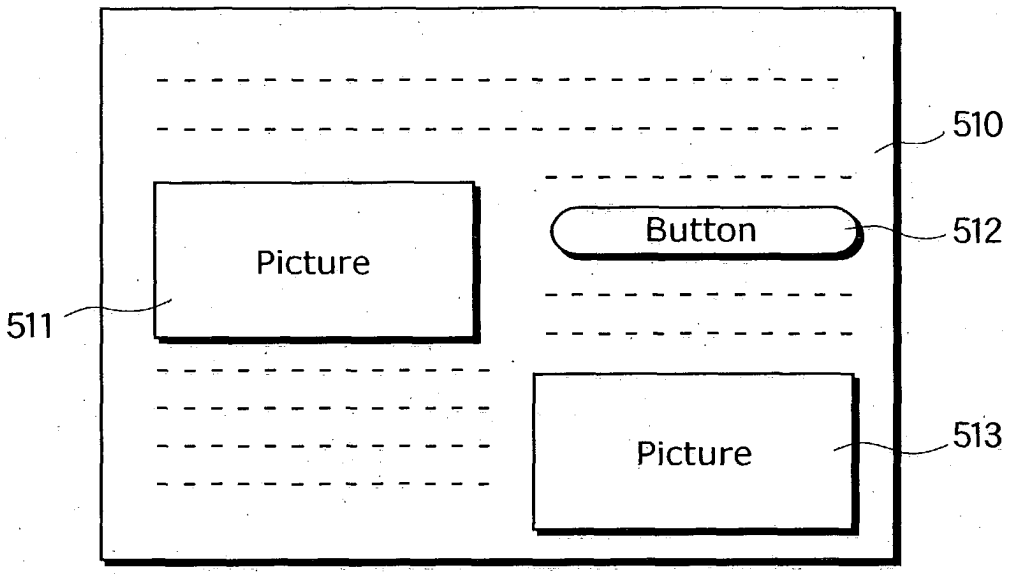

510
Picture
511
Button
512
Picture
513

Fig. 6B

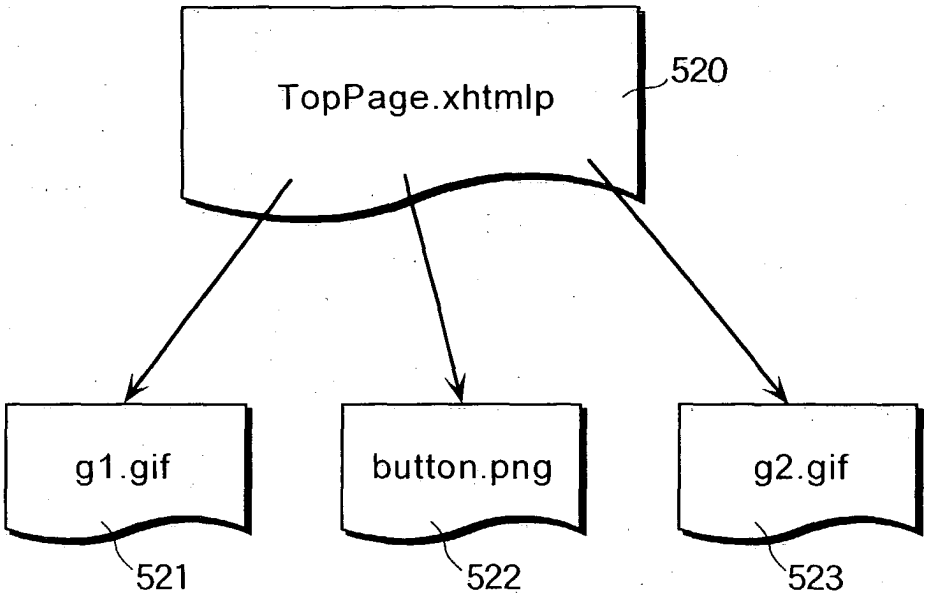

TopPage.xhtmlp
520
g1.gif
button.png
g2.gif
521
522
523

Fig. 7

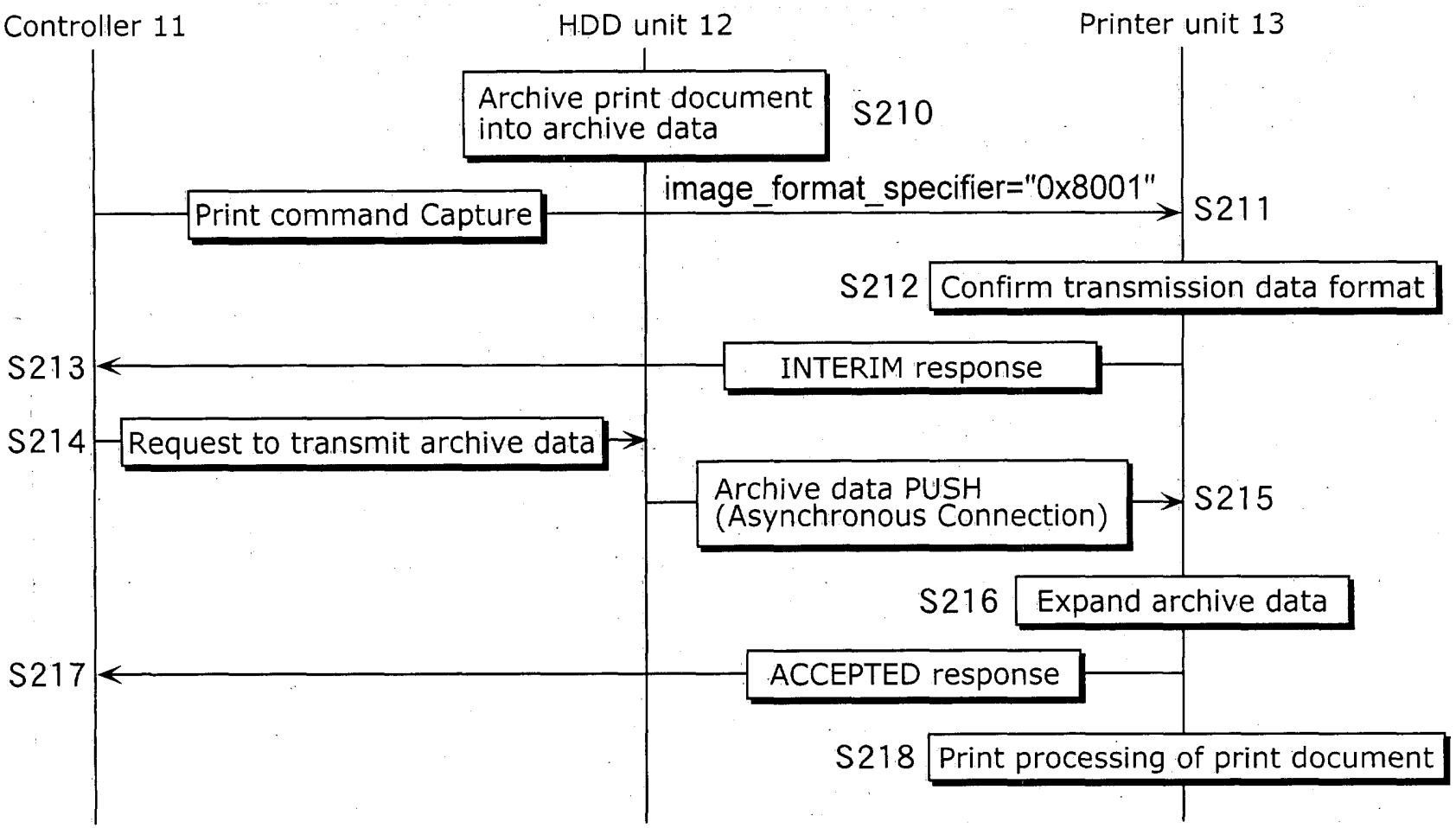

Controller 11
HDD unit 12
Printer unit 13
Archive print document into archive data
S210
image_format_specifier="0x8001"
Print command Capture
S211
S212
Confirm transmission data format
S213
INTERIM response
S214
Request to transmit archive data
Archive data PUSH (Asynchronous Connection)
S215
S216
Expand archive data
S217
ACCEPTED response
S218
Print processing of print document

Fig. 8A

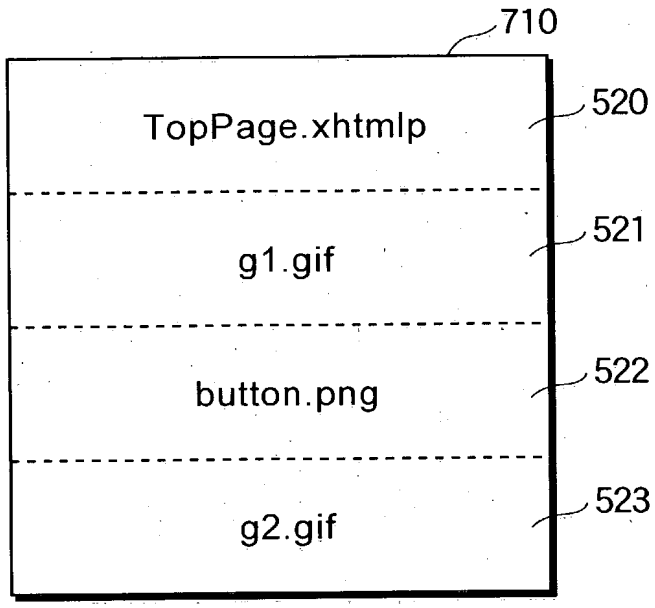

710
TopPage.xhtmlp
520
g1.gif
521
button.png
522
g2.gif
523

Fig. 8B

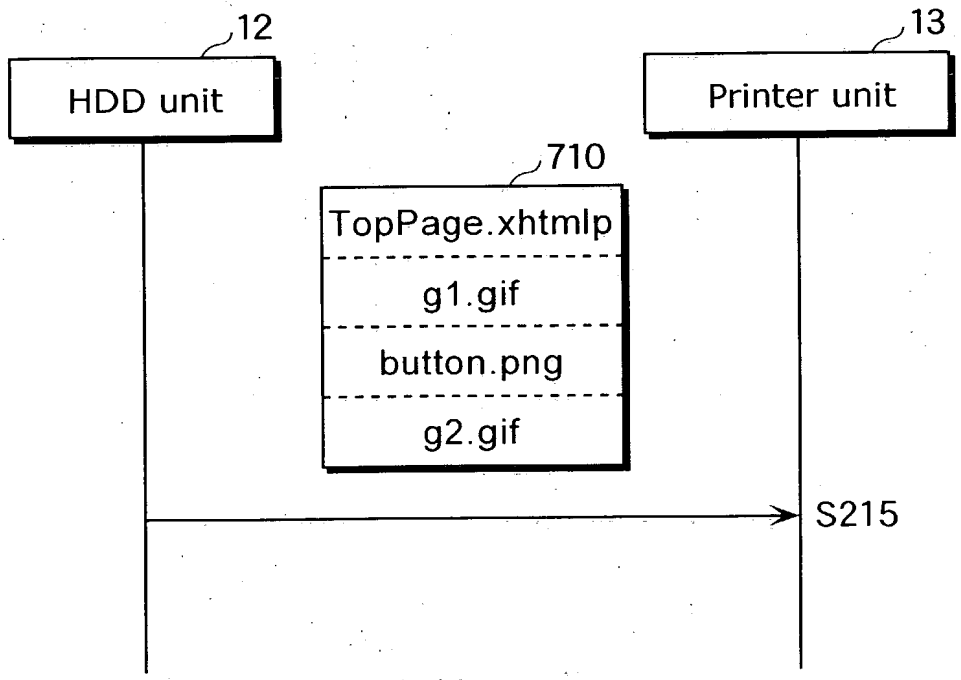

12
HDD unit
13
Printer unit
710
TopPage.xhtmlp
g1.gif
button.png
g2.gif
S215

Fig. 9

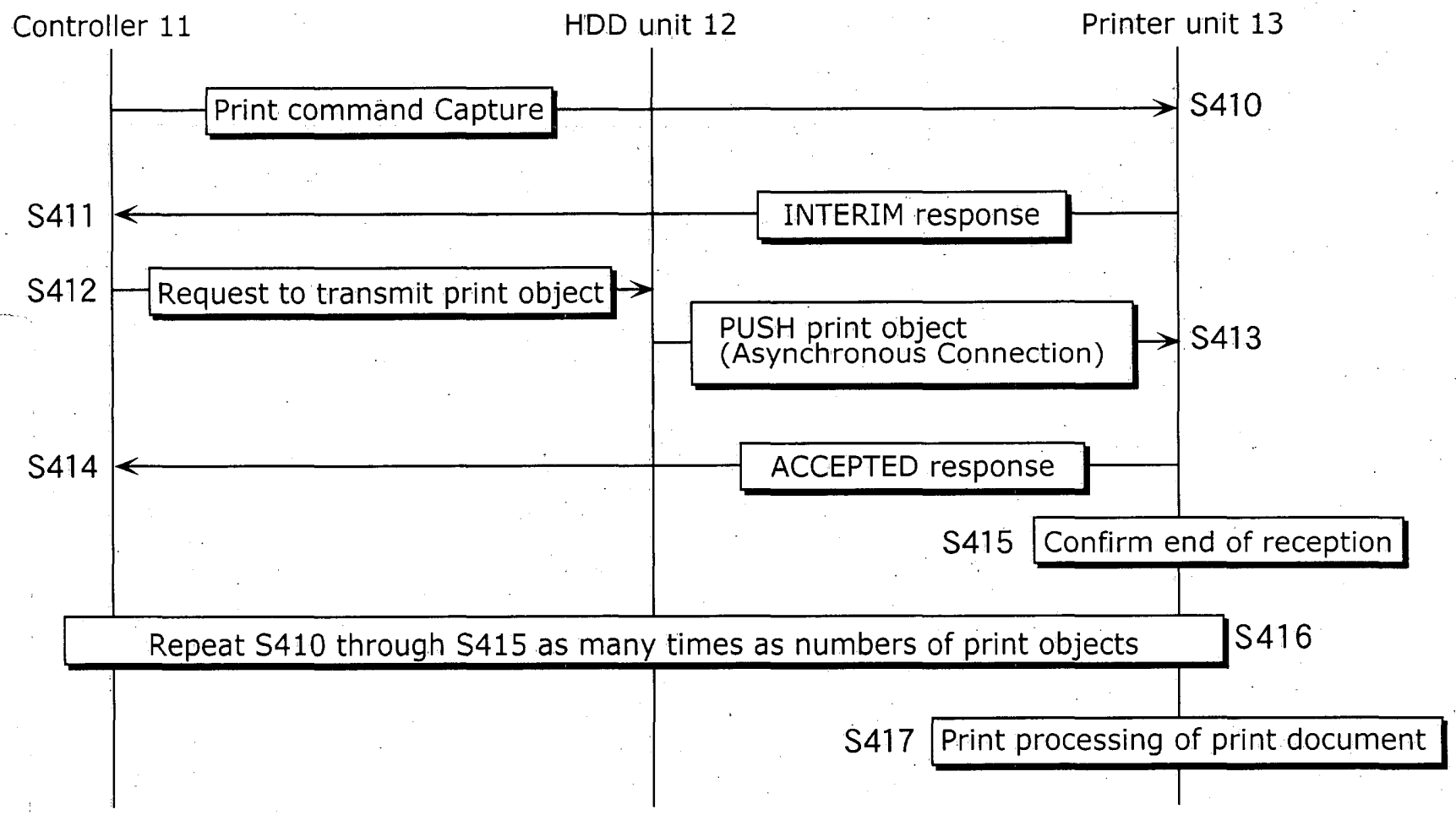

Controller 11
HDD unit 12
Printer unit 13
Print command Capture
S410
S411
INTERIM response
S412
Request to transmit print object
PUSH print object
(Asynchronous Connection)
S413
S414
ACCEPTED response
S415
Confirm end of reception
Repeat S410 through S415 as many times as numbers of print objects
S416
S417
Print processing of print document

Fig. 10

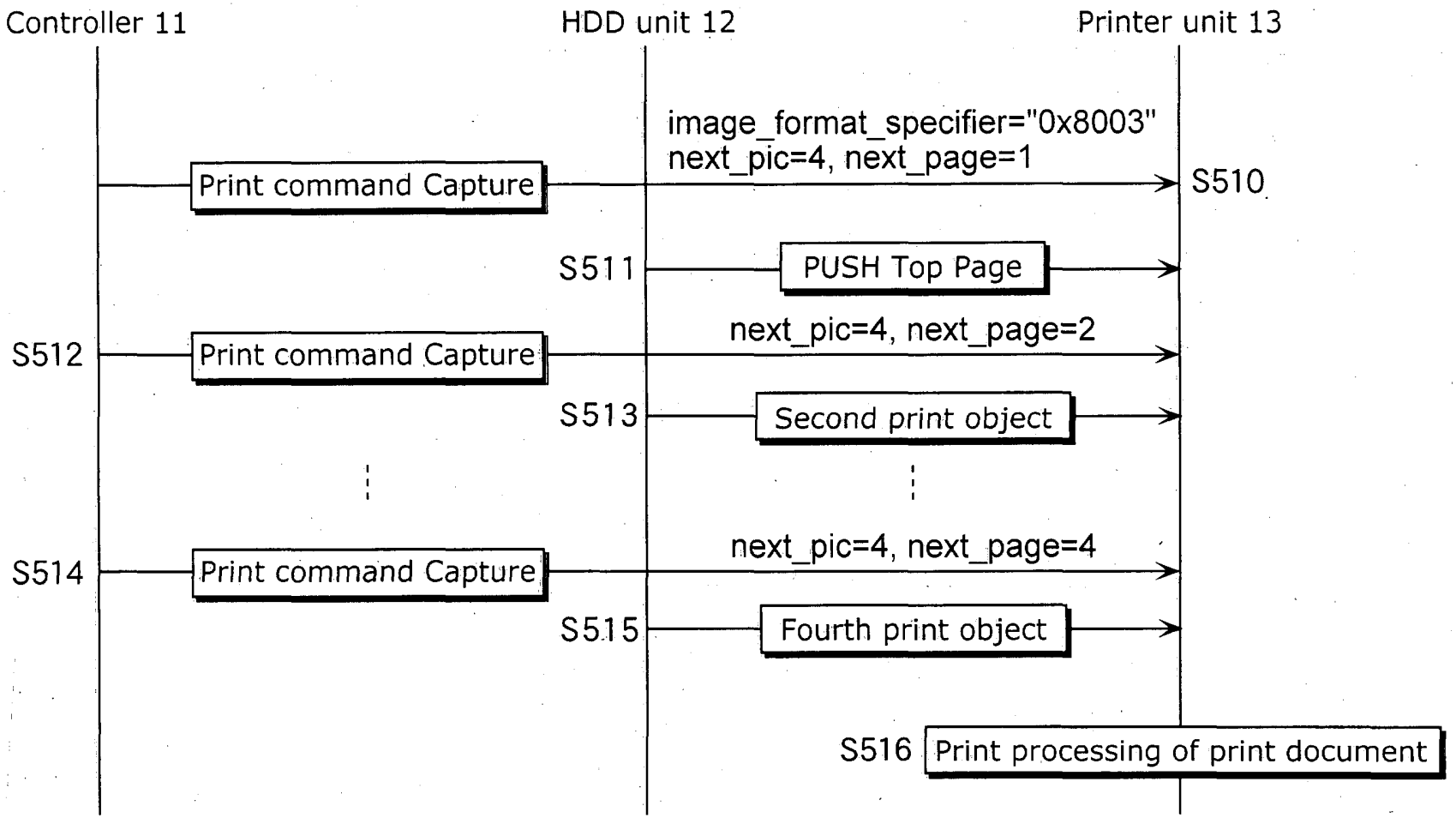

Controller 11
HDD unit 12
Printer unit 13
image_format_specifier="0x8003"
next_pic=4, next_page=1
Print command Capture
S510
S511
PUSH Top Page
next_pic=4, next_page=2
S512
Print command Capture
S513
Second print object
next_pic=4, next_page=4
S514
Print command Capture
S515
Fourth print object
S516
Print processing of print document

Fig. 11

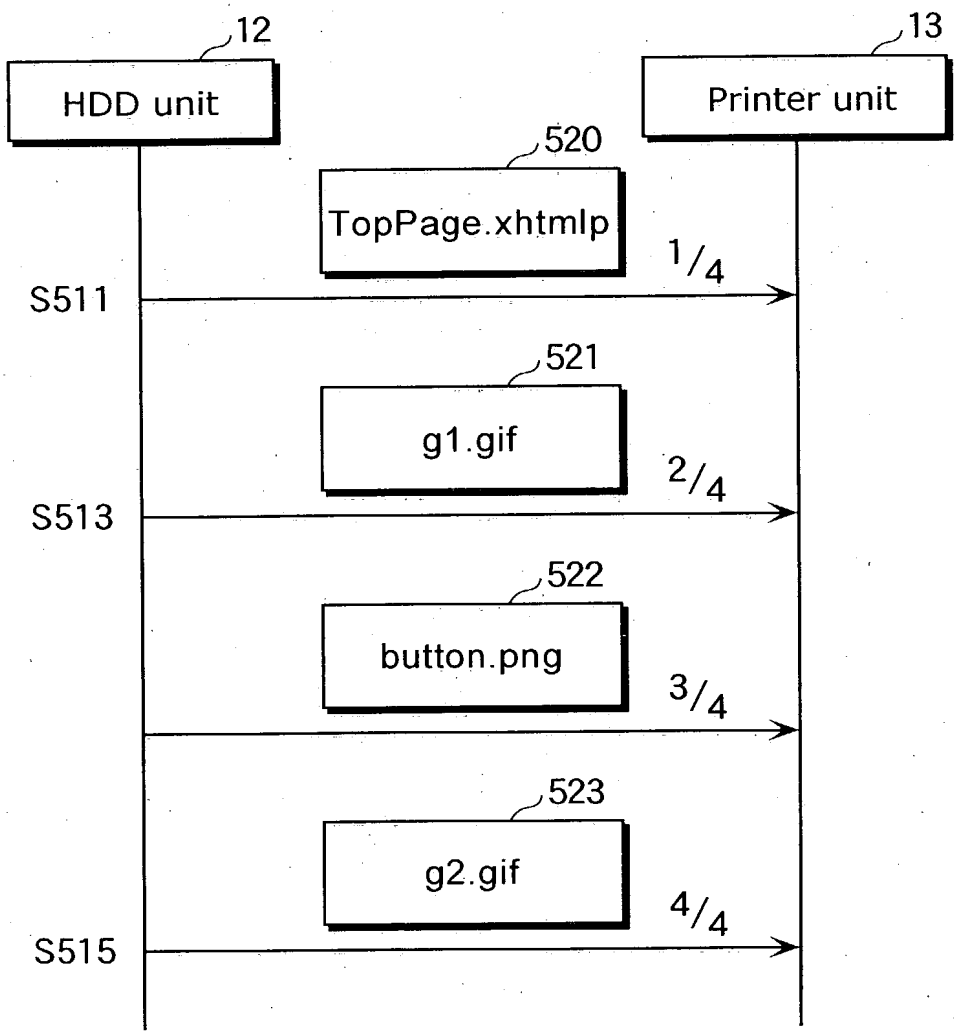

12
HDD unit
13
Printer unit
520
TopPage.xhtmlp
1/4
S511
521
g1.gif
2/4
S513
522
button.png
3/4
523
g2.gif
4/4
S515

Fig. 12

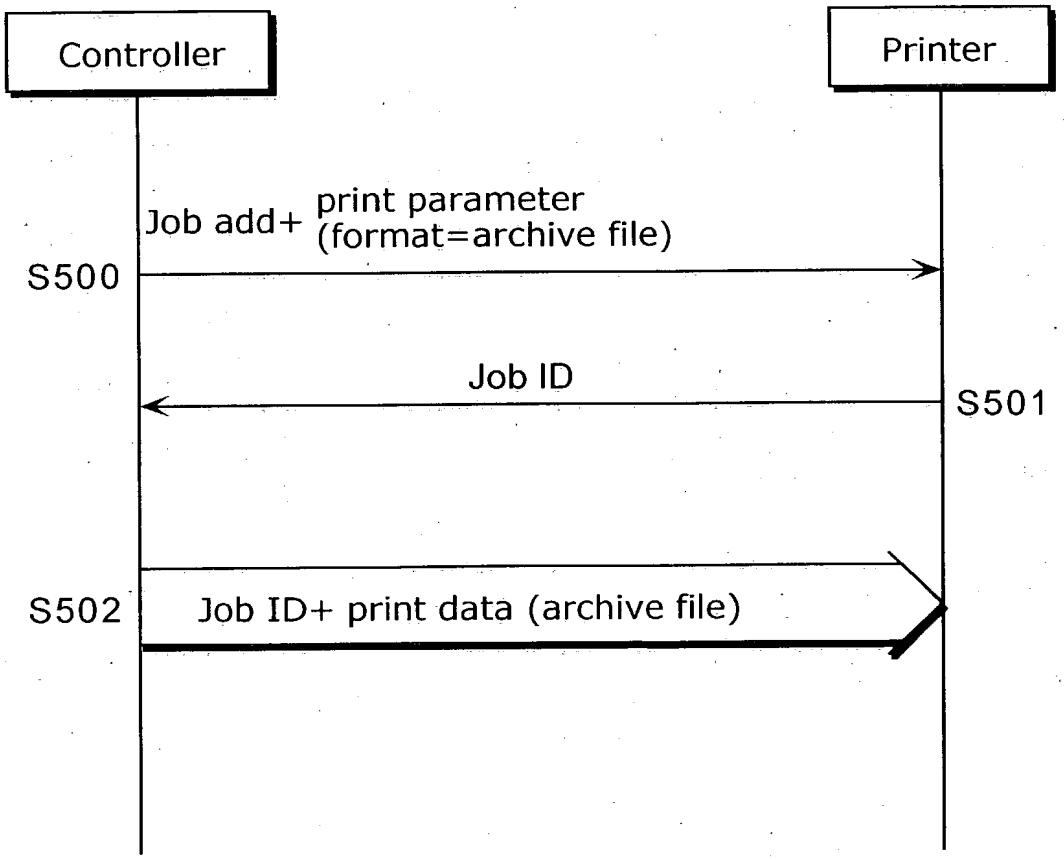
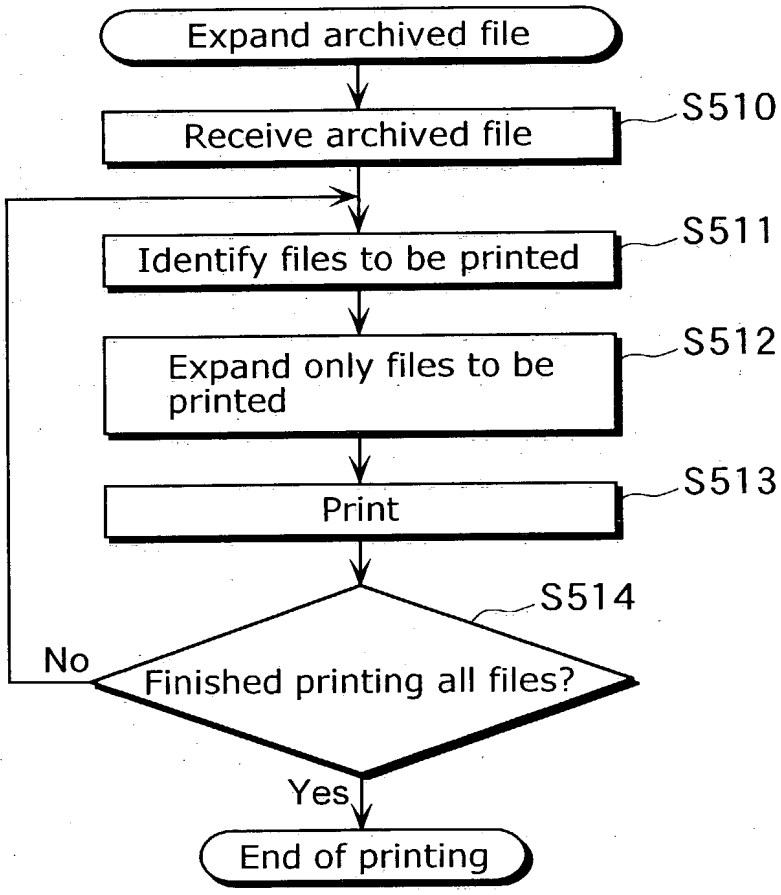

Controller
Printer
Job add+ print parameter (format=archive file)
S500
Job ID
S501
S502
Job ID+ print data (archive file)

Fig. 13


Expand archived file
Receive archived file
S510
Identify files to be printed
S511
Expand only files to be printed
S512
Print
S513
S514
No
Finished printing all files?
Yes
End of printing